

Asahi Kasei Plastics North America, Inc.

AsahiKASEI

Monday, 13 July 2009

Tenac™ 7010

Asahi Kasei Plastics North America Inc. - Acetal (POM) Homopolymer

Unit System:

Actions

Legend [\(Open\)](#)

General Information

General

Material Status	• Commercial: Active
Availability	• North America
Features	• High Flow • Homopolymer
Uses	• Electrical/Electronic Applications • Industrial Applications • Household Goods • Thin-walled Parts
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.42		ASTM D792
Density	1.42	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)	34	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	34	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.018 to 0.022	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow	1.8 to 2.2	%	
Flow	1.8 to 2.2	%	
Water Absorption (24 hr)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	493000	psi	ISO 527-2
Tensile Strength	10000	psi	ASTM D638
Tensile Stress (Yield)	10600	psi	ISO 527-2
Tensile Elongation (Break)	30	%	ASTM D638
Tensile Strain (Break)	25	%	ISO 527-2
Flexural Modulus	441000	psi	ASTM D790
Flexural Strength	15700	psi	ASTM D790
Taber Abrasion Resistance (1000 Cycles)	13.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	3.3	ft·lb/in ²	ISO 179/1eA
Notched Izod Impact	1.11	ft·lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	94		
R-Scale	120		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	342	°F	ASTM D648
Heat Deflection Temperature (66 psi, Unannealed)	329	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	277	°F	ASTM D648
Heat Deflection Temperature (264 psi, Unannealed)	212	°F	ISO 75-2/A
CLTE - Flow	0.000056	in/in/°F	ASTM E831
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL	HB		UL 94

Additional Information

The values listed as Mold Shrinkage, were tested in accordance with Asahi Kasei method.

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3.0 to 4.0	hr
Rear Temperature	374 to 383	°F

Middle Temperature	383 to 392 °F
Front Temperature	392 to 410 °F
Nozzle Temperature	392 to 410 °F
Mold Temperature	120 °F
Injection Pressure	11000 to 20000 psi
Holding Pressure	11000 to 20000 psi
Back Pressure	500 to 1500 psi
Screw Speed	20 to 100 rpm
Screw Compression Ratio	3.0:1.0 to 4.5:1.0

Injection Notes

Drying Conditions: Usually not necessary

Injection Speed: 1-5 Seconds

Cooling Time: Short

Screw Type: General

Slightly longer cycle times may be required to mold wall thicknesses over 1/4 inch.

Slightly higher injection pressures and mold temperatures may be required to mold wall thicknesses below 0.100 inches.

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	374	°F
Cylinder Zone 2 Temp.	392	°F
Cylinder Zone 3 Temp.	410	°F
Melt Temperature	374 to 410	°F

Notes

¹ Typical properties: these are not to be construed as specifications.



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